



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

IM62/0118

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/030,051	02/24/98	126	BRUNSMAN, D 1755	01/18/00
First Named Applicant	KODAS, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION: COPPER POWDERS METHODS FOR PRODUCING POWDERS AND DEVICES FABRICATED FROM SAME

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
1 NAN-004-5	106-403.000	H08	UTILITY	YES	\$605.00	04/18/00

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

A. Pay FEE DUE shown above, or

B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

YOUR COPY

# Notice of Allowability

Application No.

09/030,051

Applicant(s)

Kodas et al

Examiner

David M. Brunzman

Group Art Unit

1755



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

- ☒ This communication is responsive to examiner's amendment A
- ☒ The allowed claim(s) is/are 1-28, 31-42, 44, 45, 47-69, 71-85, 87-90, 92, 94-107, 109-116, 118, 119, 121-130, and 132-138
- ☐ The drawings filed on \_\_\_\_\_ are acceptable.
- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- ☒ Applicant MUST submit NEW FORMAL DRAWINGS
- ☐ because the originally filed drawings were declared by applicant to be informal.
- ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 9.
- ☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.
- ☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

- ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

## Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152
- ☒ Interview Summary, PTO-413
- ☒ Examiner's Amendment/Comment
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☒ Examiner's Statement of Reasons for Allowance

# Interview Summary

Application No.  
09/030,051

Applicant(s)  
Kodas et al

Examiner  
David M. Brunzman

Group Art Unit  
1755



All participants (applicant, applicant's representative, PTO personnel):

(1) David M. Brunzman

(3) \_\_\_\_\_

(2) David Dockery

(4) \_\_\_\_\_

Date of Interview 11 Jan 2000

Type: ☒ Telephonic ☐ Personal (copy is given to applicant applicant's representative).

Exhibit shown or demonstration conducted: ☒ Yes ☒ No. If yes, brief description:

Agreement ☒ was reached. ☐ was not reached.

Claim(s) discussed: all

Identification of prior art discussed:

all

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Applicant's representative agreed to attached examiner's amendment to place application in condition for allowance.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1. ☒ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. ☒ Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.

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An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Dockery on 11 January 2000.

The application has been amended as follows:

Cancel nonelected claims 91, 131 and 139-221 without prejudice.

Rejoin claims 92-130, 132-138 previously withdrawn from consideration.

Claims 1-90, 92-130 and 132-138 are generic to a plurality of disclosed patentably distinct species comprising inventions wherein the functional phase comprises metallic particles 1) having an average diameter of less than 5 microns, 2) having an average diameter of less than 5 microns (or 0.3 - 3 microns), wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and wherein said metal particles comprise crystallites having an average size of at least about 40 nm, 3) having an average diameter of less than 5 microns and a surface coating, 4) having an average diameter of less than 5 microns, wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and, a non metal phase, 5) having an average diameter of less than 5 microns and a non metal phase. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Art Unit: 1755

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant's representative elected to prosecute the invention wherein the functional phase includes copper metal particles wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and wherein said particles comprise metal crystallites having an average crystallite size of at least about 40 nanometers. Claim material drawn to inventions not including the elected species has been canceled without prejudice.

In claim 28, line 4, before the period, insert --and wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and wherein said particles comprise metal crystallites having an average crystallite size of at least about 40 nanometers--

In claim 41, line 4, before the period insert --and wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and wherein said particles comprise metal crystallites having an average crystallite size of at least about 40 nanometers--

In claim 64, line 5, before the period insert --and wherein said particles comprise metal crystallites having an average crystallite size of at least about 40 nanometers--

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In claim 80, line 4, before the period insert --and wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and wherein said particles comprise metal crystallites having an average crystallite size of at least about 40 nanometers--

In claim 92, line 8, before the period insert --and wherein at least about 90 weight percent of said particles are not larger than twice said average particle size--

In claim 107, line 8, before the period insert --and wherein at least about 90 weight percent of said particles are not larger than twice said average particle size and wherein said particles comprise metal crystallites having an average crystallite size of at least about 40 nanometers--

In claim 119, line 9, before the period insert --and wherein at least about 90 weight percent of said particles are not larger than twice said average particle size--

Cancel claims 29, 30, 43, 46, 70, 86, 93, 108, 117, 120.

The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or suggest the improvements obtained by using a functional phase having the particle morphology recited in the instant claims.

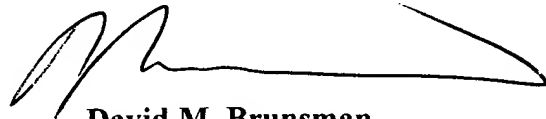
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Brunzman whose telephone number is (703) 308-3454. The examiner can normally be reached on Mondays, Tuesdays, Thursdays and Fridays from 6:30 am to 5:00 pm eastern time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached on (703) 308-3823. The fax phone number for this Group is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

*DMBrunzman*  
January 14, 2000



**David M. Brunzman**  
**Primary Examiner**  
**Group 1755**